US-China Education Review, ISSN 1548-6613
February 2011, Vol. 8, No. 2, 213-219

Gender Adeptness Among Educational Administrators for Leading Innovative Initiatives in Public Education

James L. Morrison
University of Delaware,
Newark DE, USA

G. Titi Oladunjoye
Albany State University,
Albany GA, USA

Cynthia Onyefulu
University of Technology,
Kingston, Jamaica

It may be concluded that female administrators are perceived as being more adept than their male counterparts for leading innovation in schools and leveraging resources into productive outputs. It may be concluded that both genders of administrators perceive such efforts similarly. The only two skills where gender is significant are the two competencies identified as being alert for new opportunities and synthesizing ideas into focused projects. For the other eight skills indicated in the survey, gender did not play a significant role in such perceptions.

Keywords: educational innovation, change practices, administrative leadership, initiative adeptness

Introduction

Generating innovative initiatives is currently of interest to many in senior leadership positions in public educational institutions. Wolfson (1997) reported from his research that initiatives for innovation and change are not distributed evenly among gender and socio-economic levels, and further that individual adaption to innovation is related to both individual characteristics as well as the nature of the innovation itself.

In the US, Ryan (2004) argued that the performance-based accountability demands of NCLB (no child left behind) may interfere with the ability of educational leaders to not only initiate innovative practices but also sustain such attempts at improving the quality of education K-12. Elmore (1997) also suggested that as a nation, we may be under-investing in both financial and human capital required to develop educational programs to raise the skill levels of our public school graduates. Therefore, the issue addressed in this research is how senior educational leaders perceive their capacity to implement innovative practices for enhancing the quality of education K-12. In this regard, does gender play a significant role in the ability to initiate and sustain innovative practices within public school systems?

Literature Review

As Theodore Levitt of the Harvard Business Review stated, “Innovation is the vital spark required for change, improvement and progress” (1980, p. 7). To Levitt, however, this resource is often squandered, resulting in threatening the competitiveness of our organizations. In addition, what unique to innovation is that the process is often chaotic (Peters, 1982). On the other hand, Peters also indicated that individuals who tend to

James L. Morrison, Ed.D., professor, Organizational and Community Leadership, University of Delaware.
G. Titi Oladunjoye, Ph.D., professor, Counseling & Educational Leadership, Albany State University.
Cynthia Onyefulu, Ph.D., lecturer, Education and Liberal Studies, University of Technology.

be innovative have in common the need to explore, to break through barriers, to generate new ideas, to identify opportunities, and to experiment by trying, failing and trying again (Peters, 1982).

The Current Charge to Educators

A report on The Condition of Education (2003) indicated that leaders in education need to focus on ways to improve our schools to ensure that no child is actually left behind. Former secretary of education, Ron Paige, stated in this report that the strategy behind NCLB legislation emphasizes that every student, no matter their heritage or their language, deserves a quality education. Any constraints on the ability of our leaders in public educational institutions to respond to the call for innovation, whether they be gender stereotyping, money, structure or leadership capability among others, must be addressed if our schools are going to prepare eventual graduates to compete globally against some fierce competitors. The report reminded the educational community that the world is changing fast. However, the educational practices of the past that were instrumental in getting Americans prepared to participate in the best economy in the world will not carry us to a similar degree of success in the future. The report challenged our educational leaders to initiate new instructional practices and approaches for getting innovation into the mainstream of our education programs K-12.

Institutional Environment

To Agbor (2008), leadership is the catalyst and source of organizational creativity and innovation for organizations to promote an environment where change is expected, and its leaders must build an environment conducive to renewal as well an educational culture that encourages creativity and innovation. However, he also stated that scholars know very little about the role of leadership in the innovative process. Similarly, Schein (1985) also suggested that we need to learn more about the methods leaders use for developing a culture of change and innovation. Finally, Cameron and Quinn (1999) asserted that culture of change will not occur without the involvement, commitment and active support of those in senior leadership positions convincing others of the need to innovate.

However, Horstein and DeGuerere (2006) reminded us that those in senior educational leadership positions typically operate under an authoritative structure with superintendents and principals maintaining control over faculty and staff. They argued that such organizations, operating from the authoritarian, hierarchical, command and control mode, generally produce employees that are less empowered and thus less innovative.

Gender Framework

Harper (1990) argued that gender and power issues are highly interdependent in academic institutions. Although her research focused on leaders in higher education, Harper found that female administrators had different perceptions of equity and power than did their male counterparts. She suggested that this is likely due to structural barriers in education that impact upon the ability of female administrators to advance their careers and become effective leaders in their institutions. She also suggested that females' perceptions of the possession and use of power, being different from male counterparts, play an important role for becoming key players for leading others to change.

To Edwards (1996), the spirit of innovation can be accomplished by clarifying the role of leaders to build inclusive working conditions for the members of the organization. In this regard, Edwards suggested that the diversity among leaders, of which gender is an important aspect, acts as a catalyst for establishing a social structure that assists workers in feeling that they are accepted. In public education, he stated that a gender issue

remains since male executives have dominated at the higher levels of leadership. According to Edwards, this reality of unequal portion of females in positions of senior leadership positions in education resulted in a lack of diversity of thinking at the decision-making level. He argued that the presence of dissimilar mindsets typical of gender diversity enhance creativity, flexibility, problems-solving and innovation.

As to the target of educational research on gender issues conducted in the past, Hyde (2005) suggested that there is a preoccupation with gender differences as they affect students' performance and motivation in the classroom. However, in regards to classroom instructors, Hyde stated that male and female faculties are more similar than different on most variables. To Marsh, Martin and CHENG (2008), it is important to note that as leaders develop their careers, gender issues and in particular conformity in regard to gender role stereotypes becomes increasingly important. While a search of the literature reveals that much of the focus of prior and current educational research have been on gender effects on instruction in the classroom, this research deals with gender effects upon a leader's capacity to inspire and lead others to initiate innovative efforts to enhance the quality of education overall.

Statement of the Problem

The issue surrounding leadership capacity to innovate and change today's schools indirectly reflects how far educational institutions have come in generating a level playing field for all employees. While the legal framework for treating all employees the same is in place, has this reality resulted in leaders in public education perceiving themselves having equal opportunity (and corresponding skills) to take on innovation as an integral part of their job responsibilities? In other words, is there a gender gap as to whom is more capable of generating innovative initiatives? Therefore, the research question addressed here is: Does gender play a significant role in how educational leaders perceive themselves in generating innovation in the workplace? Correspondingly, the null hypothesis tested is: There is no significant differences by gender in the perceived adeptness of skills used to leverage school resources into productive innovative outputs.

Research Methodology

Based on a survey of innovative literature and corresponding input from a panel of two superintendents and one principal in public education in the US, a written survey was constructed consisting of three segments. Part one requested data on personal demographics of the respondents, seeking information on gender, position and title. Part two consisted of two sub-parts for gathering data on identifying: (1) educational priorities for generating initiatives for innovative efforts; and (2) sources of creative ideas that leaders rely on for inspiring others to innovate. Part three focused on gathering data relating to identifying gender differences in adeptness for leading innovative efforts within the public school system.

As a basis for establishing validity in the research process, the survey instrument was initially administered to three superintendents and two principals as part of a pilot study. Based upon the results of this preliminary study, the survey was revised. Therefore, the instrument was deemed as having face validity (Carmine & Zeller, 1979). In addition, Cronbach's Alpha measure was used to evaluate the reliability of the survey. Reliability is defined as the ability of the measurement to be consistent and yield similar results under similar subjects and conditions (Carmines & Zeller, 1979). In this regard, reliability was evaluated by assessing the internal consistency of the items on the survey. For this study, the alpha level of 0.89 is more than the 0.70 desirable,

though this limit may be lower at 0.60 for an exploratory study.

Sample Population

The survey form was disseminated to 250 superintendents and 250 principals within public education in the US. The sample was selected through a random selection process using a list of 10,000 educators developed by MDR (market data retrieval), an educational data retrieval service situated in Shelton, Connecticut. The survey was disseminated on November 15, 2007, with the final date of collection on December 3, 2007.

Statistical Analysis

A multivariate statistical procedure was utilized to determine if there is any significant difference in the perceptions of both male and female educational leaders as to adeptness at initiating and leading innovation in their schools. A correlation coefficient was also computed for comparing the ranking of priorities of innovation targets and sources of ideas between male and female educational administrators. For this study, an educational leader is identified as individual with the title of superintendent (or assistant superintend) and principal.

Findings

Demographics

There were 73 males and 41 females responding to the written survey, totaling 114 in the sample, representing 23% response rate (see Table 1). In terms of gender specific, the response rate for males was 28% and female leaders, 17%.

Table 1
Demographics by Gender, Title and No. of Years Service (N = 114)

Title	Service years	Gender	
		Male	Female
Superintendent	0-2	10	5
	3-5	12	5
	6-10	11	0
	11+	12	4
Asst superintendent	0-2	4	3
	3-5	1	1
	6-10	0	0
	11+	0	2
Principals	0-2	8	6
	3-5	7	9
	6-10	5	4
	11+	3	2
Total		73	41

Of the 73 male respondents, 45 were superintendents and 5 assistant superintendents. There were 14 female administrators with the title of superintendents and 6 assistant superintendents. At the principal level, 23 males identified themselves as principals with 21 females at the same job title (see Table 1). Based on a multivariate statistical analysis, there is no significant difference in the characteristics of the sample population based on a combination of gender, title and number of years of service (Wilks' Lamba: $F = 1.267$, $p > 0.168$). Therefore, the sample population for this study appears to have the expected distribution in terms of professional characteristics. Due to the similarities among the job characteristics of those in the research sample, male and female

administrators were treated as two independent variables with the data gathered but not analyzed by an individual's title or years of service.

Ranking of Sources for Innovation Ideas

The findings indicate that both male and female senior administrators generally rank teachers and school administrators as the two primary sources for innovative ideas. Male (mean = 1.56) and female (mean = 1.85) administrators identified classroom teachers as their primary source of ideas (see Table 2). Male (mean = 2.33) and female (mean = 2.46) leaders ranked other school administrators as their second choice. It is interesting to note that the business community, political forces and special ad hoc groups were not perceived as frequent sources of innovative ideas in their schools. The mean scores for these three groups ranged from 4.02 to 5.98. In terms of overall correlation between the ranking of five sources of possible ideas, the coefficient correlation of 0.77 indicates that both groups in the sample perceive the ranking of their sources similarly.

Table 2

Ranking of Sources for Innovative Initiatives (N = 114)

Sources	Male (N = 73)		Female (N = 41)	
	Mean	Ranking	Mean	Ranking
Teachers	1.56	1	1.85	1
Admin	2.33	2	2.46	2
Parents	4.22	3	4.61	5
Business community	4.34	4	4.02	4
Ad hoc group	4.41	5	3.90	3
Political community	5.98	6	5.51	6

Notes. Rating scale: Mean rating: 1 = Top priority; 6 = Low priority; Correlation coefficient = 0.77143.

Ranking of Educational Targets for Innovation

Both male and female administrators ranked their priorities similarly for innovation targets with the three primary targets being instruction, student assessment and curriculum. Both groups had mean scores below 2.60 for each of these three top categories of targets (see Table 3). It is interesting to note that innovation in regards to assessing teacher performance, instructional technology and addressing federal mandates were ranked at the bottom of the list with mean scores of both male and female administrators generally over 4.00 with just one exception. In addition, the overall ranking of the six items identified in this study were closely aligned with a correlation coefficient of 0.97.

Table 3

Ranking of Educational Targets for Innovation (N = 114)

Innovative target	Male (N = 73)		Female (N = 41)	
	Mean	Ranking	Mean	Ranking
Instruction	2.30	1	2.19	1
Student assessment	2.58	2	2.59	2
Curriculum/Program	2.60	3	2.61	3
Teacher performance	4.12	4	3.61	4
Inst. technology	4.38	5	4.48	5
Federal mandate	5.04	6	5.49	6

Notes: Rating scale: 1 = Primary target; 6 = Least target; Correlation coefficient = 0.97143.

Analysis of Adeptness at Innovation by Gender

Generally, mean scores of both male and female leaders, being above 3.00, indicate that female administrators were generally perceived as been more adept in the skills needed to lead innovative efforts in their school districts (see Table 4). An overall mean score of male administrators (mean = 3.16) and female administrators (mean = 3.42) support the finding that both genders perceive females more adept with their innovative leadership skills. While generally, females were perceived as more adept, only in the skill of "asking the right questions" were male (mean = 3.47) administrators more positive than their female (mean = 3.38) counterparts. Moreover, only in "assessing organizational capacity to innovate" did males (mean = 2.96) perceive themselves more adept than their female (mean = 3.38) counterparts. However, such differences were not deemed significant (see Table 4). In terms of being significant, "being alert for innovative opportunities" and "having the capability of synthesizing innovative ideas into focused projects" were two skills females perceived themselves significantly more adept (means = 3.59 and 3.51) than their male counterparts (means = 3.18 and 3.21).

Table 4

Adeptness in Leading Innovative Change by Gender, Title and Years of Service

Leadership skills	Male	Female	ANOVA	
	(N = 73)	(N = 41)	F statistic*	P significance**
Alert for innovation opportunities	3.18	3.59	2.977	0.035*
Synthesizing innovative ideas	3.21	3.51	5.618	0.001*
Collaborating	3.17	3.38	0.199	0.897
Coaching others	3.03	3.33	0.111	0.953
Fostering trust	3.07	3.28	0.556	0.650
Asking right questions	3.47	3.38	1.189	0.318
Assess. org. capacity	2.96	3.38	1.543	0.209
Managing time	3.19	3.34	1.239	0.310
Thinking creatively	3.21	3.64	1.456	0.232
Demon. a passion of innovation	3.18	3.55	1.955	0.106
Grand	3.14	3.42		

Notes. Reliability quotient: Cronbach's alpha score = 0.879; Rating scale: 1 = Male most adept; 3 = Neither more adept; 5 = Female most adept; *F statistic—ANOVA F test of leadership skill by gender effect: Mean squared divided by mean square for error; **P significance—If leadership skill by gender effect greater than 95%, then factor is significant at the 0.05 level; ***Significant at 0.05 level of confidence.

Conclusion

It may be concluded that female administrators are perceived as being more adept than their male counterparts for leading innovation in schools for leveraging resources into productive outputs. It may be concluded that both genders of administrators perceive such efforts similarly. The only two skills where gender is significant are reflected in the competencies of "being alert for new opportunities" and "synthesizing ideas into focused projects". For the other eight skills indicated on the survey, gender did not play a significant role in such perceptions. Therefore, the null hypothesis for this research that there is no significant differences by gender in the perceived adeptness of skills used to leverage school resources into productive innovative outputs was accepted. It should be noted that title and years of services were not statistically significant factors in the sample of this study.

It may also be concluded that educational leaders in this sample population perceive innovative initiatives primarily coming from teachers and other administrators within a school district. There appears to be an in-house mentality as to how to initiate new ideas. Those outside of the school districts are perceived as not having similar impact upon generating innovative change within schools. It may also be similarly concluded that the targets for innovative change are instruction and curricula. Innovative attempts to change teacher performance remains a low priority.

References

Agbor, E. (2008). Creativity and innovation: The leadership dynamics. *Journal of Strategic Leadership, 1*(1), 39-45.

Cameron, K., & Quinn, R. (1999). *Diagnosing and changing organizational culture.* San Francisco: Jossey-Bass Business and Management Series.

Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment*. Beverly Hills, C.A.: Sage.

Edwards, S. (1996). The value in diversity. *CA Magazine, 129*(8), 16-21.

Elmore, R. (1997). *School reform from the inside out: Policy, practice, and performance.* Cambridge, M.A.: Harvard Education Press.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis.* Upper Saddle River, NJ: Prentice Hall.

Harper, K. (1990). *Power and gender in academic administration: A study of directors of BSW programs* (Vol. 5, No.1, pp. 81-93) DOI: (0.1177/088610999000500106).

Horstein, H. A., & DeGuerre, D. W. (2008). Bureaucratic organizations are bad for our health. *Ivey Business Journal Online,* 1-4.

Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychological, 60,* 581-592.

Levitt, T. (1986). *Marketing imagination* (Expanded edition). New York: The Free Press.

Marsh, H. W., Martin, A., & CHENG, J. (2008). A multilevel perspective on gender in classroom motivation and climate: Potential benefits of male teachers for boys. *Journal of Educational Psychology, 100*(1), 78-95.

Peters, T., & Waterman, R. (1982). *In search of excellence.* New York: Time Warner, Inc..

Ryan, J. E. (2004). The perverse incentives of the NCLB Act. *New York University Law Review,* Spring. Retrieved from http://ssrn.com/abstract=476463 or DOI: 10.2139/ssrn.10.2139/ssrn.476463

Schein, E. (1985). Organizational culture and leadership. In *Organizational dynamics*. San Francisco: Jossey-Bass.

The condition of education. (2003). Report by the U.S. Department of Education. National Center for Educational Statistics (NCES).

Wolfson, M. (1997). Divergent inequalities: Theory and empirical results. *Review of Income Wealth, 3*(4), 401-421.